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Arizona Corporation Commission

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2012 MAR 29 P 12:16 RENEWABLE ENERGY STANDARD  
AND TARIFF COMPLIANCE REPORT FOR 2011  
DOCKET NO. E-01703A-10-0267

MAR 29 2012

ARIZONA CORPORATION COMMISSION  
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INTRODUCTION

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Pursuant to A.A.C. R14-2-1812, ~~Duncan Valley Electric Cooperative, Inc.~~ ("DVEC"/"The Cooperative"); submits this compliance ~~report for calendar year 2011~~. This report relates to the DVEC's EPS/REST Plan for 2011 which was approved by the Commission in Decision No. 72180 dated February 11, 2011 (the "REST Plan").

### EXECUTIVE SUMMARY

The REST Plan uses surcharge dollars from the Cooperative's Commission-approved retail tariffs to support programs for developing renewable facilities, purchasing renewable energy and participation in large-scale renewable generation projects. Funds are also used for administration and advertising activities.

The REST Plan for 2011 was approved by Decision No. 72180 dated February 11, 2011 pursuant to R14-2-1814. R14-2-1814 provides that, upon approval of the Cooperative's REST Plan, its provisions substitute for the Annual Renewable Energy and Distributed Renewable Energy requirements of Rules 1804 and 1805, respectively.

### 2011 INSTALLATIONS AND ENERGY GENERATED

In 2011, 3 new PV locations were installed in the Cooperative's service area. Of these new sites, 1 was located off-grid and 2 were located on-grid for a total installed capacity of 14.64 kW. Of these new units, all 3 are distributed generation (1 residential and 2 commercial).

In 2011, 1 solar water heating system was installed in the Cooperative's service area. This water heater installation is expected to save approximately 3,034 kWh per year.

In 2011, no small wind systems were installed in the Cooperative's service area.

These additions bring the total number of installations supported by the Cooperative to 10. PV installs total 9 (5 on-grid, 4 off-grid) with a total installed capacity of 37.96 kW. Solar water heating installs total 1. The annual kWh savings for this install equal 3,034 kWh.

DVEC also owns the renewable energy credit (REC) rights to renewable energy installations located in Graham County Electric Cooperative's (GCEC) service area totaling 9 kW<sup>1</sup> and .3 kW of a solar generating facility at Arizona Electric Power Cooperative (AEP CO).

<sup>1</sup> Prior to 2011, DVEC participated along with GCEC and Trico Electric Cooperative in a joint RES plan administered by AEP CO. GCEC used pooled funds to provide rebates for installations in its service territory. Of those installations 9 kW have been allocated to DVEC for funds that it provided to the funding pool.

In addition to renewable energy installations, DVEC participates in a geothermal REC purchase contract with Willcox Greenhouse. DVEC's 2011 share of the RECs produced by Willcox Greenhouse equaled 270,446 kWh.

#### R14-2-1812 INFORMATION

Pursuant to R14-2-1812.B, DVEC supplies the following information:

1. The kWh of energy or equivalent obtained from Eligible Renewable Energy Resources in 2011 was 376,400 kWh. DVEC does not meter actual output from PV and solar water heater sources. Energy production is estimated based on stated capacity of the facilities.
2. The estimated annualized kWh of energy obtained from Eligible Renewable Energy Resources in 2011 was 376,978 kWh. The Cooperative does not track the actual metered output of distributed generation ("DG") resources.
3. The kW of generation capacity, disaggregated by technology type is 37.96 kW for all PV installations, 1.4 kW solar water heater installations, a 0.3 kW interest in the 25 kW AEPCO solar generating unit, and 9 kW of renewable energy installations installed in Graham County Electric Cooperative's service area.
4. Cost information in cents per kWh for the energy obtained from Eligible Renewable Energy Resources is \$0.061 for energy generated from PV and \$0.030 for energy saved from solar water heaters.<sup>2</sup> Total costs per kWh based upon full installation expenses are \$0.136 for PV and \$0.079 for solar water heaters. The actual cost per kWh for geothermal energy was \$0.028. Cost information of generation capacity disaggregated by technology type is \$3,350 for each kW of installed PV, based upon rebates paid.
5. The Renewable Energy Credits in relation to the Annual Renewable Energy Requirement are 376,978 kWh.<sup>3</sup> The Renewable Energy Credits used to satisfy the Distributed Renewable Energy Requirement are 376,978 kWh.
6. Through its rebate program, DVEC pays an upfront incentive to qualifying projects on a first come, first served basis. In 2011, all applicants for upfront incentives (rebates) were paid. No RFPs for utility-owned renewable resources were issued by DVEC in 2011.

<sup>2</sup> Cost per kWh is based on REST funds paid for the installation divided by estimated annualized kWh over an expected life span of 25 years.

<sup>3</sup> As stated previously, R14-2-1814 provides that, upon approval of the Cooperative's REST Plan, its provisions substitute for the energy requirements of Rules 1804 and 1805.

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**RENEWABLE ENERGY STANDARD  
AND TARIFF COMPLIANCE REPORT FOR 2011  
DOCKET NO. E-01749A-10-0268**

AZ CORP COMMISSION  
DOCKET CONTROL**INTRODUCTION**

Pursuant to A.A.C. R14-2-1812, ~~Graham County Electric Cooperative, Inc.~~ ("GCEC"), submits this compliance report for calendar year 2011. This report relates to the Cooperatives' REST Plan for 2011 which was approved by the Commission in Decision No. 72181 dated February 11, 2011 (the "REST Plan").

**EXECUTIVE SUMMARY**

The REST Plan uses surcharge dollars from GCEC's Commission-approved retail tariffs to support programs for developing renewable facilities, purchasing renewable energy and participation in large-scale renewable generation projects. Funds are also used for administration, advertising and educational activities.

The REST Plan for 2011 was approved by Decision No. 72181 dated February 11, 2011 pursuant to R14-2-1814. R14-2-1814 provides that, upon approval of the Participating Cooperatives' REST Plan, its provisions substitute for the Annual Renewable Energy and Distributed Renewable Energy requirements of Rules 1804 and 1805, respectively.

**2011 INSTALLATIONS AND ENERGY GENERATED**

In 2011, 8 new PV locations were installed in the GCEC service area. All of these new sites were located on-grid for a total installed capacity of 72.04 kW. All of these new units are considered residential distributed generation.

In 2011, no new wind or solar water heating systems were installed in the GCEC service area.

These additions bring the number of installations supported by GCEC to 119. PV installs total 112 (35 off-grid, 77 on-grid) with a total installed capacity of 574.065 kW, plus a 6.4% share of the AEPCO Headquarters 25 kW utility-owned PV system. GCEC receives credit for 1.6 kW of this unit. Wind installs total 6 for an installed capacity of 34 kW. Solar water heating installs total 1 with a capacity of 0.531 kW. GCEC also participates in the Willcox Greenhouse Geothermal Project ("WGH") in conjunction with other electric Cooperatives. GCEC's share of the energy capacity for 2011 in WGH was 293.292 kW.

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In 2010 as part of a REC allocation settlement with other electric Cooperatives, GCEC relinquished the rights to annual REC's in the amount of 555,780 kWh. The total renewable energy generated in 2011 for which GCEC can claim credit is 1,423 MWh.

#### R14-2-1812 INFORMATION

Pursuant to R14-2-1812.B, GCEC supplies the following information:

1. The estimated annualized kWh of energy obtained from Eligible Renewable Energy Resources in 2011 was 1,422,858 kWh. GCEC does not track the actual metered output of their residential distributed generation ("DG") resources. The utility-owned commercial DG installation output is also estimated. The 1,422,858 kWh was calculated by adding the estimated metered output of the utility-owned metered system to the estimated annualized output of the remaining installed capacity.
2. The kWh of energy obtained from Eligible Renewable Energy Resources normalized to reflect a full year's production is 1,422,858 kWh.
3. The kW of generation capacity, disaggregated by technology type is 574.065 kW for all PV installations, 34 kW for all small wind installations, 0.531 kW for all solar water heater installations and a 1.6 kW interest in the 25 kW AEPCO solar generating unit and a 293.292 kW interest in the WGH geothermal project.
4. Cost information in cents per kWh for the actual energy obtained from Eligible Renewable Energy Resources is \$.065 per kWh for energy generated from PV; \$.071 for energy generated from wind; and \$.044 per kWh for energy saved from solar water heaters. Cost information in cents per kW of generation capacity disaggregated by technology type is \$3,559 for each kW of installed PV and \$3,896 for each kW of installed wind.<sup>1</sup>
5. The Renewable Energy Credits in relation to the Annual Renewable Energy Requirement are 1,422,858 kWh.<sup>2</sup> The Renewable Energy Credits used to satisfy the Distributed Renewable Energy Requirement are 1,422,858 kWh.
6. Concerning resource acquisition procedures, most Arizona cooperatives are Rural Utilities Services ("RUS") borrowers and are subject to RUS procedures on

<sup>1</sup> The cost information included in this report for the renewable installations is based upon eligible rebates to customers. Rebates are paid as funds become available.

<sup>2</sup> As stated previously, R14-2-1814 provides that, upon approval of the Participating Cooperatives' REST Plan, its provisions substitute for the energy requirements of Rules 1804 and 1805.

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resource acquisition as specified in the Code of Federal Regulations (generally, 7 CFR § 1710, *et seq.*). Among other requirements, requests for proposals must be issued to potential providers and solicitations are published in at least three national publications in addition to direct contacts. While GCEC is not an RUS borrower, it generally follows RUS procedures for resource acquisitions. No RFPs for renewable resources were issued by GCEC in 2011.